

Centering Disability in Technology Policy

Issue Landscape and Potential Opportunities for Action

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Contributing Organizations

American Association of People with Disabilities

The American Association of People with Disabilities (AAPD) is a disability advocacy organization. We bring different types of disabled people together. We connect disabled people and allies. And we work to change the world. We want disabled people to have more opportunities to succeed. We want disabled people to be treated equally. We also want disabled people to have more power in politics.

AAPD is a national organization. We include people with all different kinds of disabilities. AAPD advocates for civil rights. We want to make things better for more than 60 million people with disabilities in the U.S. AAPD believes disabled people should have the same opportunities as everyone else. We want disabled people to make enough money to be comfortable and live good lives. We want disabled people to be more independent. And we want disabled people to participate in politics and policy.

Center for Democracy & Technology

The Center for Democracy & Technology (CDT) is a nonprofit technology advocacy organization. CDT is 25 years old. CDT supports democratic values. That means everyone has a voice in policy. CDT cares about technology policy and design. CDT focuses on individual people's rights. CDT is in Washington, D.C. We also have an office in Brussels (a city in Europe). CDT includes people and groups working on technology in different ways. CDT works on solving the hardest technology policy problems. Our team of experts includes lawyers, tech experts, academics, and researchers. That way we include diverse perspectives to all of our work. Learn more: cdt.org.

Freedman Consulting

Freedman Consulting works on many issues related to new ideas or actions to help all people. We find smart solutions to clients' hardest problems. We use our diverse experience in giving money, politics, policy, nonprofits, journalism, and communications to help many clients that help people. We have worked as partners with the country's top policymakers, largest foundations, leading advocacy groups, and other public interest leaders. We help clients define their goals. We also help clients build flexible, complete approaches.

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Executive Summary

I. About This Report

Technology has a lot of power. Technology can make the world more inclusive. Technology can make the world more fair.

Many people are **marginalized** in the world. This means they deal with discrimination. Other people treat them badly. Sometimes, laws are unfair to marginalized people. People can be marginalized because of their race or skin color (**racism**). People can be marginalized because of their gender (**sexism** or **gender-based oppression**). People can be marginalized because of their disability (**ableism**).

Technology can help marginalized people be safer. Technology can help marginalized people take control of their lives. Technology can help marginalized people earn money too.

But technology doesn't always help marginalized people. Technology often hurts marginalized people instead. Technology can make discrimination worse. This is even worse for people who are marginalized in more than one way, like disabled people of color.

This report is about technology and disability issues. Two organizations worked together to write it. Then they got help from another group. Those groups are the American Association of People with Disabilities (AAPD) and the Center for Democracy and Technology (CDT). AAPD and CDT talked to 20 leaders in disability and technology advocacy. Then they wrote this report, with help from the Freedman Consulting company.

This report will help other organizations work on disability and technology issues. This report will help other organizations include disabled people. This report says how technology organizations can include disability. It also gives

ideas for disability organizations to advocate on technology issues. Some technology issues are related to important disability advocacy issues. This report also talks about challenges for disability and technology organizations working together.

Technology has helped disabled people get more access. Technology has helped disabled people have more self-determination. Technology has even helped some disabled people live longer. This report understands that technology can be a good thing for disabled people.

But technology can also be unfair to disabled people. Technology can help some people and hurt other people at the same time. Making new technologies that are fair is hard. People who make new technology need to include marginalized people. They need to be careful when they make new technology. They need to think about how technology can hurt marginalized people. And they need to try to make technologies that don't hurt marginalized people.

II. How We Wrote This Report

AAPD and CDT did a lot of research for this report. They also talked to experts. All the research happened between May 2021 and September 2021.

Here's what we did:

- **Expert interviews.** We talked to 20 experts and advocates. 10 of the experts work on technology issues. 10 of the experts work on disability issues. We talked to people with disabilities. We also talked to disabled people who are marginalized in more than one way. (This can mean disabled women or disabled people of color, for example.)
- **Reading research.** We read more than 50 news articles and reports about disability and technology issues.
- **Discussion and feedback.** We wrote this report. We shared it with leaders in technology and disability. We listened to their feedback. Then we made edits.

III. Overall Themes

Many of the experts talked about four major topics in their interviews:

1. You can't escape from technology.

Technology is a big part of everyone's lives. And it's getting bigger and bigger every day.

You can't advocate for inclusive and fair technology without thinking about disability. Technology can hurt and help people in all parts of life. Technology shows up in housing, healthcare, school, and work.

Technology is an even bigger part of life for disabled people. This means it can hurt disabled people even more too.

2. Accessibility is an important issue.

Technology can make the world more accessible. For example, text messages can help deaf people talk to hearing people. Zoom meetings mean that people in wheelchairs don't have to wait for special paratransit vans to go to meetings or parties. Virtual reality can help people with anxiety learn new things.

So accessibility has to be part of technology advocacy. This means accessibility on the internet, accessible devices, and accessible programs. It also means technology advocacy has to think about what helps and hurts disabled people.

3. Diverse groups of people should create technology. Diverse groups of people should also work on technology policy issues.

Computer programs called **algorithms** make automatic decisions about important parts of our lives. Algorithms make decisions about government services, employment, business, health, housing, immigration, and the court system. Diverse groups of people can help make sure algorithms are less biased. They can help make sure algorithms discriminate less.

4. Algorithms are bad at understanding disabled people.

Disabled people are very diverse. People can have many different kinds of disabilities. And people with the same disabilities can also be very different from each other. Algorithms are very bad at figuring out how disabled people work. Algorithms are bad at understanding other marginalized people too.

IV. Technology and Disability Issues

Technology shows up in all parts of life. But we focus on 9 important technology and disability issues:

1. Accessing high-speed internet and devices

People need the internet to find jobs, go to school, use the bank, and stay connected to the community. But many disabled people don't have internet at home. And disabled people of color are even less likely to have internet at home. And sometimes disabled people who have internet at home don't use it.

Disabled people might not use the internet because it's expensive. Computers, phones, and tablets are also expensive. And lots of computers, phones, and tablets are inaccessible for disabled people.

2. Having enough money and benefits

Technology helps people earn and keep money. Many disabled advocates want to make sure disabled people can earn and keep money.

Disabled people are twice as likely to be poor than nondisabled people. So a lot of disabled people get benefits like Social Security and food stamps. Disabled advocates want to make sure disabled people get the right benefits. But algorithms sometimes make decisions about benefits. Algorithms can stop people from getting benefits. They can also keep disabled people out of affordable housing.

3. Getting a fair chance in employment

Everyone should have a fair chance to get hired and go to training programs. But technology can discriminate against disabled people who want to work. Algorithms can make decisions about hiring that hurt disabled people. Algorithms can control people on the job and hurt disabled people. And jobs like Uber or GrubHub delivery can be even harder for disabled people.

4. Protecting people's privacy and information

The United States doesn't have an overall federal privacy law. There are just some state laws and some limited federal laws (like for health privacy). But most of the laws say nothing about discrimination. It's also hard to make people and companies follow the law.

We don't have enough laws to protect people. This is even worse for marginalized people like disabled people and people of color. Systems that connect to each other or use information about people's bodies can be dangerous for disabled people.

5. Stopping hate speech but protecting free expression

The internet is a public space. This means it's important for people to have free expression. But there is also a lot of hate speech online. There is a lot of bad information online that can hurt people. So technology policy has to think about protecting people's civil rights and stopping hate speech. It also has to think about making sure people can have free expression at the same time.

6. Protecting students from surveillance

Police, immigration officers, and school leaders are using **surveillance** technology. Surveillance means watching and listening to people. Some examples of surveillance technology are social media monitoring, software that guesses if students are threats, and test taking software. Surveillance technology can discriminate against disabled people and

people of color. Surveillance technology can get students punished or kicked out of school. A lot of students punished in schools are disabled. They are often students of color too.

7. Stopping police abuse

Police do more surveillance on disabled people. They arrest disabled people more, and send more disabled people to prison. This is even worse for disabled people of color. Police can use technology in racist and ableist ways. Some examples of police technology are computer programs that recognize people's faces and how they walk, guess where police should go, watch people at the border, and video sign language interpreters.

8. Accessing healthcare

Healthcare systems want to use technology to make getting care faster and better. But it doesn't always work. Algorithms in healthcare can hurt marginalized people. So can **telehealth** (seeing a doctor at home on your computer) and algorithms that make care decisions. Disabled people also have to worry about who can see and use their information.

9. Being careful about new technology

New technology can help disabled people communicate and be more independent. But disabled people have to be part of design teams. Disabled people are paying attention to self-driving cars, virtual reality, and technology that automatically recognizes speech.

V. Challenges, Needs, and Opportunities

Technology can hurt disabled people in many ways. These are two important questions:

- What stops people from working on technology and disability at the same time?
- What support do leaders and organizations need to do their work well?

A. Challenges

1. We have to talk about accessibility. At the same time, talking about accessibility isn't enough.
 - a. Inaccessible technology can totally exclude disabled people from working on accessibility.
 - b. Disability organizations have to take the lead on accessibility issues. So that can make it hard to work on other technology issues.
 - c. But it's still bad to assume that technology and disability issues are only about accessibility.
2. Disability organizations have their own needs.
3. Many people don't understand that disabilities can be diverse. So they don't understand how technology can hurt disabled people. They also don't know how to fix technology.
4. Disabled people aren't included in a lot of policy advocacy.
5. There are very few experts on disability *and* technology.
6. Many people don't know how technology can hurt disabled people.
7. There aren't a lot of connections between technology and disability advocates.
8. There are a lot of divides between civil rights organizations and disability organizations.

B. Needs and Opportunities

1. Technology organizations need to work on true inclusion.
2. Disabled people need paid fellowships and funding to work on technology policy.
3. There should be paid listening sessions and focus groups to learn from disabled people.
4. Disability and technology advocates need opportunities to work together
 - a. Build trust and respect
 - b. Figure out common goals
 - c. Get the public involved
 - d. Support leaders
5. Marginalized people deserve support. Disability and technology organizations should care about intersectionality. (Intersectionality is understanding when people are marginalized in more ways than one. For example, understanding how white disabled people and disabled people of color are treated differently.)
 - a. Understand intersectionality more
 - b. Pay attention to marginalized people
 - c. Create an inclusive design group
 - d. Help disability rights groups and civil rights groups work together

B. Needs and Opportunities (Continued)

6. Disabled people need plain language and other accessible resources.

7. Disability rights and civil rights organizations need fair funding.

8. Help technology organizations include disabled people

a. Help government and companies work together

b. Work with tech companies

c. Help students and researchers work with technology groups

9. Support research on disability and technology

a. Using the Americans with Disabilities Act and other laws about technology

b. Support research and advocacy to make government algorithms in benefits more fair

c. Do research on algorithms that read people's online content

d. Pay for research on the public's opinions about technology and disability

e. Research how student surveillance can hurt disabled people

f. Research how police technology can hurt people with mental illnesses

g. Create technology policies that include disability

B. Needs and Opportunities (Continued)

10. Connect technology and disability advocacy projects
 - a. Work with marginalized people to make federal data privacy laws better
 - b. Advocate for federal funding to help people get reliable internet, phones, computers, and tablets
 - c. Advocate for more remote work to give disabled people better options
 - d. Talk about test-taking software and student surveillance as privacy issues
 - e. Investigate how automatic immigration technology hurts disabled immigrants
 - f. Work on automatic captioning and software that recognizes speech as a complicated issue
 - g. Help disability organizations learn more about technology
 - h. Do trainings for disability groups about federal technology policy
 - i. Give money to disability groups to work on federal technology policy

VI. Conclusion

Justice in technology means caring about disability rights. There are lots of connections between disability and technology. There are also new disability and technology issues. And there are challenges to doing more work on disability and technology. This report is a good start. It will help people and organizations be more inclusive. It will help technology and disability advocates work together more.

This report will help people ask better questions about disability and technology. It will give people ideas and information they can use. It will talk about disability and technology policy. And it will help people make connections with disability and technology advocates.

We should help make technology more accessible. We should help disabled people have enough money and benefits. And we should help disabled people succeed and have self-determination. Disability rights are civil rights. Disability rights are human rights.

Introduction

Technology has a lot of power. Technology can make the world more inclusive. Technology can make the world more fair.

Many people are **marginalized** in the world. This means they deal with discrimination. Other people treat them badly. Sometimes, laws are unfair to marginalized people. People can be marginalized because of their race or skin color (**racism**). People can be marginalized because of their gender (**sexism** or **gender-based oppression**). People can be marginalized because of their disability (**ableism**).

Technology can help marginalized people be safer. Technology can help marginalized people take control of their lives. Technology can help marginalized people earn money too.

For example, Helen Keller was a leader with the American Foundation of the Blind (AFB). In 1932, AFB made the first audiobooks so blind people could listen to books. Audiobooks help blind people. Audiobooks also help people who can see. Often, technology that helps disabled people also helps nondisabled people. Disabled people invent technology all the time. And new technology like smart homes can help disabled people be more independent.

But technology doesn't always help marginalized people. Technology often hurts marginalized people instead. Technology can make discrimination worse. This is even worse for people who are marginalized in more than one way. Lots of people are marginalized in more than one way, like:

- Disabled people of color
- Women of color
- Immigrants with disabilities

People with power can use marginalized people's information to discriminate against them. Computer programs called **algorithms** can make automatic decisions about important parts of our lives. It can be hard to advocate when algorithms discriminate. Algorithms make it hard to figure out who is responsible for discriminating. Algorithms can make it hard to ask for justice.

These problems are even bigger than accessibility. Accessibility is very important. Many disabled advocates have talked about accessibility for a long time. Sometimes more than 10, 20, or even 30 years. A lot of the world is still inaccessible for people with disabilities. But algorithms have more problems than just accessibility. They're also unfair. They can hurt people.

Technology justice means making technology that helps everyone. It also means stopping technology from hurting people. Technology justice is important for people who make new technology. Technology is also important for people who make laws and policy about technology.

But technology advocates often don't think about disability. They don't talk to disabled people. And disabled people get left out of the conversation.

This report is about technology and disability issues. Two organizations worked together to write it. They also got help from one more group. Those groups are the American Association of People with Disabilities (AAPD) and the Center for Democracy and Technology (CDT). AAPD and CDT talked to 20 leaders in disability and technology advocacy. Then they wrote this report with help from the Freedman Consulting group.

This report will help technology and disability advocates work together. It will help technology and disability advocates learn from each other. Good technology advocates need to listen to disabled advocates. Technology advocates should learn from disabled advocates. Technology advocates should work with disabled advocates. And technology advocates should support disabled advocates.

Many disabled advocates believe in the saying, "Nothing About Us Without Us." This means that conversations about disability have to include disabled people. This report tries to listen to that saying.

This report will help other organizations work on disability and technology issues. This report will help other organizations include disabled people. This report says how technology organizations can include disability. It also gives ideas for disability organizations to advocate on technology issues.

Some technology issues are related to important disability advocacy issues. Technology shows up in all parts of life. But we focus on 9 important technology and disability issues:

- A. Accessing high-speed internet and devices
- B. Having enough money and benefits
- C. Getting a fair chance in employment
- D. Protecting people's privacy and information
- E. Stopping hate speech but protecting free expression
- F. Protecting students from surveillance
- G. Stopping police abuse
- H. Accessing healthcare
- I. Being careful about new technology

This report also talks about challenges for disability and technology organizations working together. Civil rights groups, disability groups, and technology groups should work together. They should talk about issues they have in common. They should try to be more inclusive. Working together will help all of these groups accomplish their goals.

Here's what one disabled leader told us: "For a conversation to be successful, it has to be one that is grounded in the goal of increasing and protecting the autonomy and self-direction of disabled people in their own lives."

This means that technology groups should listen to what disabled people want. They should care about disabled people getting to make decisions for themselves. They should care about self-determination.

How Technology Can Help Disabled People

Technology has helped disabled people get more access. Technology has helped disabled people have more self-determination. Technology has even helped some disabled people live longer.

Technology is changing how everyone lives, works, and plays. But this change is happening very fast. So we need to think carefully about these changes. Disabled people are still discriminated against. Disabled people aren't treated equally.

Overall, technology can be good for disabled people. One disabled expert said, "Technology creates opportunity for people with disabilities." The expert said technology also breaks down barriers.

Here are some examples of ways technology helps disabled people:

- Blind people use screen readers to listen to information on phones and computers
- Deaf people can use video chat to talk in sign language
- Deaf and hard of hearing people can use automatic captions to understand videos and sound recordings
- People who need help doing things can use devices that recognize their voices to do things at home

Technology can be good for disabled people. But technology can also hurt disabled people. Technology can be risky. And technology policy has to think about what's good and bad about technology. Technology policy should think about how technology can help disabled people. Technology policy should also think about how technology can hurt disabled people. Technology policy should try to stop discrimination.

This report will talk about how technology can hurt disabled people. This report also talks about how to stop technology from hurting disabled people.

We should try to make new technology that helps people. But we have to make sure new technology doesn't discriminate against people either. Technology can make life better for disabled people. So we need to make technology fair. We have to be inclusive. We have to be careful about how we make new technology. We have to be careful about what laws we pass. We have to care about how technology helps or hurts marginalized people. And we have to try to stop technology from hurting marginalized people.

How We Use Language In This Report

We talked to lots of people about this report. They used different language to talk about disability.

Some people like to use **identity-first language** (like “disabled people”). These people think being disabled is an important part of who they are. Other people like to use **person-first language** (like “people with disabilities”). These people want to be seen as people first. We’re not taking a side about this. Lots of people have different opinions on language.

Some experts say they do **disability rights** work. Other experts say they do **disability justice** work. Usually, people who talk about disability rights care about changing laws and policy a lot. And people who talk about disability justice think changing laws is not enough. This report talks about disability rights and disability justice.

Laws in the United States also use the word “disability” to mean different things. For example:

- The Social Security Act helps disabled people get health care like Medicare and Medicaid. The Social Security Act also helps disabled people get money and benefits. The Social Security Act says a disabled person has to have a major impairment that lasts a long time. That means a person has to have a hard time doing something important, like eating or walking. The Social Security Act also says a disabled person is someone who can’t do any real paid work. So it’s really hard to prove you are disabled under the Social Security Act.

- But the Americans with Disabilities Act just says disability is any impairment that has a big impact on a major life activity. For example, a person with bipolar that has a big impact on their life might be able to do a paid job. That person has a disability under the Americans with Disabilities Act. But they don't have a disability under the Social Security Act.

Disabled experts also talked about different opinions on identity. And they talked about different opinions about what disability means.

Technology experts also used different language. We try to use their words.

Some technology experts talk about **artificial intelligence**. Artificial intelligence (AI) is any computer program that can learn new information. AI can work on its own, like when your apps guess what ads you should get. There isn't a person deciding what ads you get, just the AI. AI can also work with people, like when a dating website gives you suggestions about who to talk to. You can decide to talk to the people or not. There are lots of types of AI.

Some technology experts talk about **algorithmic decision-making**. This is when algorithms make decisions. It can also be when algorithms make guesses about information. Some algorithms use AI. Other algorithms don't use AI.

Some technology experts talk about **automated decision-making**. This is when algorithms use AI to make decisions on their own. Automated decision-making happens without people getting involved.

These three ideas are all connected. They have some overlap. But they're also different.

How We Wrote This Report

AAPD and CDT did a lot of research for this report. They also talked to experts. All the research happened between May 2021 and September 2021. Our approach included:

- **Expert Interviews:** We talked to 20 experts and advocates. 10 of the experts work on technology issues. 10 of the experts work on disability issues. We talked to people with disabilities. We also talked to disabled people who are marginalized in more than one way. (This can mean disabled women or disabled people of color, for example.)
- **Reading Research:** We read more than 50 news articles and reports about disability and technology issues.
- **Discussion and feedback:** We wrote this report. We shared it with leaders in technology and disability. We listened to their feedback. Then we made edits.

There is another, longer version of this report with more complicated language. It has more links to other research, writing, and news other people have done. Those sources also shaped this report.

Overall Themes

Many of the experts talked about four major topics in their interviews:

- A. You can't escape from technology.
- B. Accessibility is an important issue.
- C. Diverse groups of people should create technology. Diverse groups of people should also work on technology policy issues.
- D. Algorithms are bad at understanding disabled people.

Here's what these topics mean:

A. You can't escape from technology.

Technology is a big part of everyone's lives. And it's getting bigger and bigger every day.

COVID-19 made technology an even bigger part of life. One disability expert said people had to use technology to get vaccines and government help. Technology can make it hard for disabled people to keep up. Technology assumes people do things the same way and the same speed. But disabled people often do things differently.

Another disability expert said COVID-19 gave people more options in life. People could get virtual healthcare without going in-person. People could speak up in town hall meetings online. People could take classes and go to school online too. But technology can also hurt people. Technology can watch what people do. Technology can control people. Technology can invade people's privacy. And technology can discriminate.

You can't advocate for inclusive and fair technology without thinking about disability. Technology can hurt and help people in all parts of life. Technology shows up in housing, healthcare, school, and work. Technology is an even bigger part of life for disabled people. This means it can hurt disabled people even more too.

B. Accessibility is an important issue.

Accessibility is a civil right. Accessibility is also important for technology policy. Technology can make the world more accessible. For example, text messages can help deaf people talk to hearing people. Zoom meetings mean that people in wheelchairs don't have to wait for special paratransit vans to go to meetings or parties. Virtual reality can help people with anxiety learn new things.

But technology can also make the world inaccessible. Technology can exclude disabled people:

In February 2021, WebAIM said [86% of the top 1 million websites failed an accessibility test](#). They had words that are too hard to see or read on them. The same group said the websites had an average of over 50 accessibility mistakes each.

For two years, Facebook showed ads to blind people without saying they were ads. Facebook also broke accessibility rules that help blind people who use screen readers.

A group called the [Information Technology & Innovation Foundation](#) also did an accessibility test. They looked at popular federal government websites. They picked the top 3 pages on each website. And almost half of the government websites failed an accessibility test on one of their top pages. The websites failed the tests even though the law says they're supposed to be accessible. More government services are moving online. So inaccessible websites can break the law. They can also make it hard for disabled people to survive.

Accessibility has to be part of technology advocacy. This means accessibility on the internet, accessible devices, and accessible programs. It also means making education accessible. And it means teaching disabled people how to use the internet, phones, computers, and tablets. There are important laws like the Americans with Disabilities Act (**ADA**) and the Individuals with Disabilities Education Act (**IDEA**). But schools break the laws a lot. So lots of disabled people are less confident about using the internet. Disabled people can't always afford internet access either.

It's hard for disabled advocates to talk about tech issues when lots of technology is still inaccessible. It also means technology advocacy has to think about what helps and hurts disabled people.

C. Diverse groups of people should create technology. Diverse groups of people should also work on technology policy issues.

Computer programs called algorithms make automatic decisions about important parts of our lives. Algorithms make decisions about government services, employment, business, health, housing, immigration, and the court system. One disability justice leader said algorithms make decisions about "renting, food stamps, hiring, [whether] you are allowed out on bail."

But tech companies that make **algorithms** mostly hire white men. A group called the AI Now Institute looked at how many Black people and women work in tech. They said that only 2.5% of people at Google are Black. Only 4% of people at Facebook and Microsoft are Black. And only 22% of people who work on AI are women. AI Now Institute didn't count how many disabled people work in tech. Most tech companies don't have good information about how many disabled people work for them either. Small tech companies might not know at all. So we don't know if disabled people work there or not.

Diverse groups of people can help make sure algorithms are less biased. They can help make sure algorithms discriminate less. They can make sure algorithms use good information about real people.

D. Algorithms are bad at understanding disabled people.

Disabled people are very diverse. People can have many different kinds of disabilities. And people with the same disabilities can also be very different from each other. All disabled people are different from normal. That's the only thing they all have in common.

So algorithms are very bad at figuring out how disabled people work. Algorithms are bad at understanding other marginalized people too.

It's hard to figure out if algorithms are unfair. It's hard to figure out if algorithms discriminate. Some people try to figure out if algorithms are unfair by **bias auditing**. Bias auditing means counting how many people get discriminated against. Then you check if they belong to the same marginalized group. But disabled people are too different from each other to do bias auditing.

An algorithm could discriminate against blind people. But not all disabled people are blind. An algorithm could discriminate against people with mental illnesses. But not all disabled people have mental illnesses.

Some people said all artificial intelligence is biased. They also said algorithms that make decisions have to decide what's "normal." Making decisions based on "normal" people is unfair to disabled people. One tech advocate said algorithms will stop people from getting what they need.

Another tech advocate said that comparing people to "normal" is **white supremacist**. White supremacy is racism. White supremacy says white people are better than everyone else. White supremacy says white people are normal humans. White supremacy says people of color aren't normal. So algorithms that compare people to normal might be white supremacist.

A disability advocate said that the idea of "normal" is older than algorithms. Before algorithms, the idea of "normal" hurt marginalized people too.

Technology and Disability Issues

A. Accessing high-speed internet and devices

About this issue

People need the internet to find jobs, go to school, use the bank, and stay connected to the community. Disabled people often need the internet to be included. The internet helps people advocate on important issues, like racial justice and social justice. (Racial justice means advocating for people of color to be treated fairly.) The internet helps people know what's going on in the community. And the internet helps people talk about political issues.

The COVID-19 crisis started more than a year ago. And people need high-speed internet (called **broadband**) more than ever. Millions of people in the U.S. don't have broadband. (We don't know exactly how many people don't have broadband. But [one group thinks 42 million people don't have broadband.](#))

One disability rights leader said more people understand why we need high-speed internet. Having broadband is a civil rights issue. People of color are less likely to have broadband. So are people living in the country and disabled people.

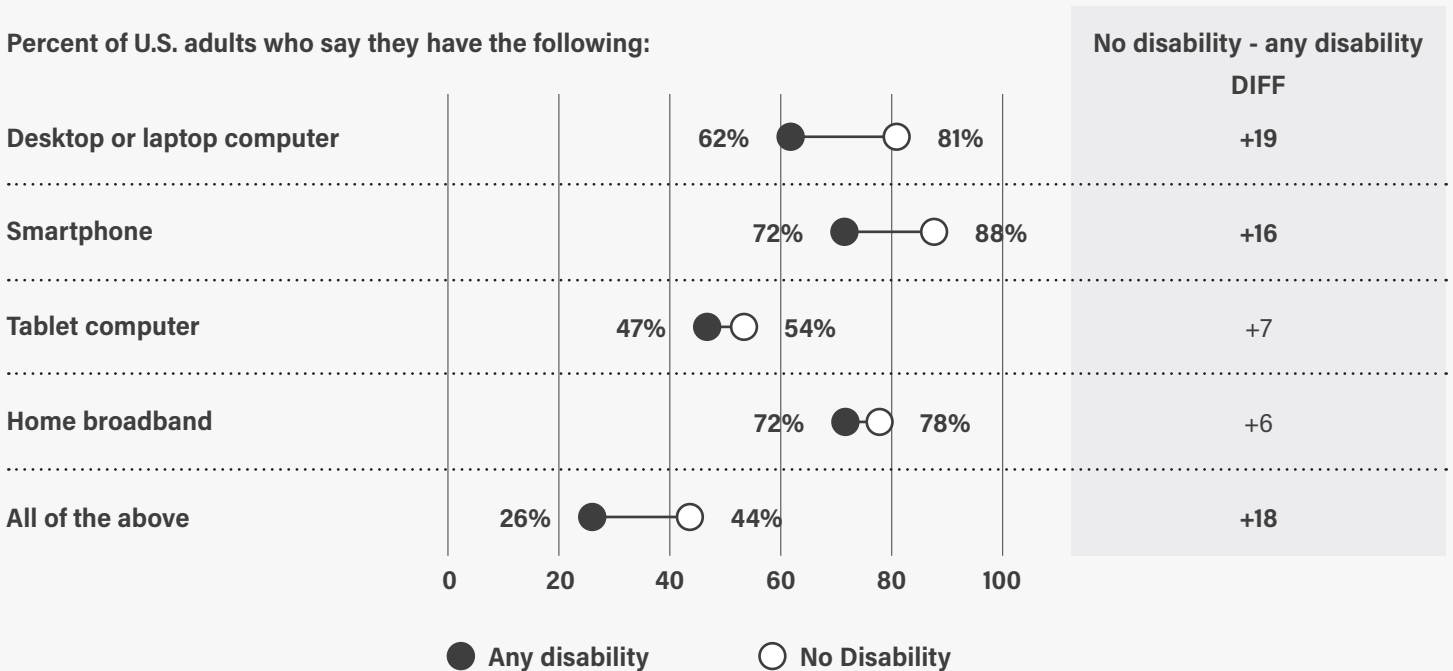
In 2018, the Census Bureau guessed that only 53% of Native Americans with computers on tribal land have broadband. That's barely more than half.

Another group called Pew Research Center did a survey in 2021. Pew said that 87% of nondisabled adults use the internet every day. But only 75% of disabled adults do. Pew also said that 44% of nondisabled adults have broadband plus a smartphone, computer, and tablet. But only 26% of disabled adults do.

Figure 1. Americans with a disability are less likely than those without one to have traditional computer, smartphone. This is a graphic. It shows how many people have a computer, smartphone, or tablet. It also shows how many people have broadband at home. And it shows how many people have one of each plus broadband. For every category, nondisabled adults are more likely to have each thing.

- 81% of nondisabled adults have a computer. But only 62% of disabled adults do. That’s a 19% difference! This is a big difference.
- 88% of nondisabled adults have a smartphone. But only 72% of disabled adults do. That’s a 16% difference! This is a big difference.
- 54% of nondisabled adults have a tablet. But only 47% of disabled adults do. That’s a 7% difference.
- 78% of nondisabled adults have broadband at home. But only 72% of disabled adults do. That’s a 6% difference.
- 44% of nondisabled adults have a computer, smartphone, tablet, AND broadband at home. But only 26% of disabled adults do. That’s an 18% difference! This is a big difference.

This information came from a survey that Pew Research did. They did the survey in January and February 2021. They didn’t count people who didn’t answer questions.}



Related issues

- **Broadband is expensive:** Disabled people might not use the internet because it's expensive. Disabled people get discriminated against for jobs. And programs like Medicaid say you have to be poor to get services. So disabled people are twice as likely to be poor as nondisabled people.

This is even worse for disabled people of color. 27% of all disabled adults are poor. But 37% of Black disabled adults are poor.

- **Computers, smartphones, and tablets are expensive and inaccessible:** Lots of computers, phones, and tablets are expensive too. And many of them are inaccessible for disabled people. Making computers and phones accessible can also be expensive.

Even federal programs don't always help. They often assume everyone's computers and phones cost the same amount. They don't give people extra money to get accessible technology. And insurance doesn't pay for a lot of accessible technology either. So people need to get help from charities.

A technology advocate said that it's dangerous when broadband, computers, and phones are too expensive. Some people can only afford to use the internet on the phone. But then they can get tracked and spied on.

One technology justice advocate also explained how the combination of a lack of affordable accessible devices and high-speed internet can also lead to the harm of greater surveillance, especially for low-income and marginalized groups who can't afford other devices: "If you are a student without access to broadband, it is much more likely that there is technology that has access to you. When you only have access through mobile phones, it is much more likely to be tracked and surveilled."

Example Opportunities

- **Give people permanent broadband benefits:** The Federal Communication Commission is a government agency. It made a program called Emergency Broadband Benefit (**EBB**). EBB gives people discounts on broadband during COVID-19. EBB also gives people money to help pay for phones, computers, and tablets during COVID-19. The government is going to replace EBB soon. The government is starting a smaller, permanent broadband benefit called the Affordable Connectivity Program.

A technology advocate says broadband should be treated like gas, power, and water. Everyone should have broadband. Everyone should be able to afford broadband.

- **Give people better benefits for internet and phone service:** The Federal Communication Commission also has programs that help Native Americans and poor people. One program is called Lifeline. It helps people pay for internet and phone service. There is a group of organizations, led by a group called MediaJustice, advocating for better internet and phone benefits.
- **Give more funding to accessible technology programs:** Every state has a program that helps people get accessible technology. This is also called assistive technology. Assistive technology can be special phones or computers for disabled people. Assistive technology can also mean changing a regular phone so a disabled person can use it.

A group called the [Association of Assistive Technology Act Programs](#) helps states run their programs. State programs teach disabled people how to use assistive technology. They let disabled people borrow assistive technology. And they help recycle assistive technology so more people get to use it. Advocates and companies should support more funding for assistive technology programs.

B. Having enough money and benefits

About this issue

Technology helps people earn and keep money. Many disabled advocates want to make sure disabled people can earn and keep money. Disabled people are twice as likely to be poor than nondisabled people. And even more disabled women are poor than disabled men. And more disabled people of color are poor than white disabled people.

But being disabled can be expensive. Disabled adults need to earn 28% more money than nondisabled people to live the same way. So disability can make people poorer. And people can become disabled because they're poor. (For example, not getting enough health care or good food can cause disabilities.)

So a lot of disabled people get benefits like Social Security, food stamps, and help paying bills. For example, 1 in 5 families getting food stamps include someone who's disabled.

Disabled advocates want to make sure disabled people get the right benefits. But algorithms sometimes make decisions about benefits. Algorithms can stop people from getting benefits. One person said that deaf people can be told to apply for benefits online. Then they're told they have to pay for their own sign language interpreter. But if they need benefits, they're too poor to pay for an interpreter.

Algorithms make more decisions about benefits than ever before. When algorithms make decisions, people can say they're not responsible. This can stop disabled people from getting benefits. And it's even worse in the COVID-19 pandemic because in-person offices are closed. So disabled people can't go in-person to ask for help.

Related issues

- **Algorithms can stop people from getting benefits:** Sometimes the government uses algorithms that automatically make decisions about benefits. This can happen with health services that lots of disabled people use. Benefits algorithms have cut off disabled people's supports. For example, [the Arkansas government used an algorithm to decide how much care disabled people needed](#). The algorithm couldn't tell the difference between diabetes or cerebral palsy. So it gave people way too little supports.

The federal government also makes states use a program called Electronic Visit Verification (**EVV**) for everyone getting Medicaid services at home. EVV makes support workers clock in and clock out on their phones. This takes up work time. And a lot of support workers can't afford smartphones. EVV also puts limits on how far away support workers can clock in from where they clock out. This means disabled people and support workers can be trapped in just one place. And disabled people in the country might not be able to get their support workers checked in.

One technology advocate said Medicaid is supposed to help people live full lives in the community. But then EVV takes away people's control and spies on them. This can also be racist and sexist because lots of support workers are women of color.

- **Algorithms can also keep disabled people out of affordable housing:** Landlords and building managers use algorithms on people's rental applications. These algorithms compare people's information to public records. These algorithms can look at people's past arrests, when they got **evicted** (forced to leave the place they rented) and credit scores. But since more people of color get arrested than white people, looking at arrest records is like asking people's race. And since more disabled people get evicted, looking at evictions is like asking people's disability status. Plus, renters don't always know what the algorithms are doing. So landlords can get away with more discrimination even if it's against the law.

A disability justice advocate said that landlords can avoid getting in trouble with algorithms. They can use algorithms to make decisions about information that's against the law to use. And they can use algorithms to make decisions about information that's legal, but still helps to discriminate. Algorithms can make it harder for disabled people to use housing benefits, like Section 8.

Example Opportunities

- **Let disabled people be in charge of making benefits programs that work:** In California, United Domestic Workers and Disability Rights California worked together against EVV. They came up with a different timesheet system for support workers to use. This system didn't track or spy on workers. It let workers put their time in after their shifts too. But the federal government rejected this system.

Technology advocacy organizations can help disabled people and support workers make their own systems.

- **Advocate for better laws about algorithms and discrimination:** In September 2020, the federal Department of Housing and Urban Development said it wanted to make it harder to file complaints about algorithms. Normally, people can file civil rights complaints using a law called the Fair Housing Act. You can say discrimination is happening if more people in one group get rejected from places to live. Even if you can't prove a specific individual was discriminated against. This is called **disparate impact**.

Lots of advocates said the government shouldn't change its rules. They said the new rules would be racist and ableist. President Biden went against the new rules. And now the government is saying it will go back to the old disparate impact rules. Technology and disability advocates could work together. They can make reports about accessible and affordable housing. They can talk about algorithms and discrimination in the reports. And they can make suggestions for the government.

C. Getting a fair chance in employment

About this issue

Everyone should have a fair chance to get hired and go to training programs. But disabled people don't always get a fair chance in employment. Living costs are more expensive. It's hard to find accessible transportation. It's hard to find accessible and safe housing. And it's hard to get services and supports.

In 2020, only 7.9% of all people were unemployed (didn't have a job). But 12.6% of all disabled people were unemployed. That's almost double!

And 12% of disabled men were unemployed. But 13.2% of disabled women were unemployed!

And 11.6% of white disabled people were unemployed. But this was 16.3% for Black disabled people, 13.2% for Hispanic disabled people, and 15.7% for Asian disabled people.

And even worse, technology can also discriminate against disabled people who want to work. Algorithms can make decisions about hiring that hurt disabled people. Algorithms can control people on the job and hurt disabled people. And jobs like Uber or GrubHub delivery can be even harder for disabled people.

Related issues

- **Hiring technology is ableist:** Algorithms can now make decisions about who gets interviews and hired for jobs. Algorithms can be used as tests on people applying for jobs. One common hiring algorithm discriminates against people whose disabilities show up in their voices and faces. For instance, deaf people, blind people, people with speech disabilities, and people who've had strokes.

A disability rights advocate said personality tests can discriminate against people with mental illness and developmental disabilities. Personality tests don't usually ask outright if someone has a disability. But they ask questions that try to get around that.

The Americans with Disabilities Act says it's against the law for companies to use tests that don't work for all disabled people. Sometimes personality tests ask questions that are basically about mental illnesses. But the ADA says it's illegal to ask about people's disabilities outright.

- **Algorithms that manage and control workers are ableist:**

Companies can use algorithms to manage workers instead of human managers. They can also use algorithms that spy on and control workers. Companies can try to get away with discrimination if the algorithm does it instead of a human manager.

One example is Amazon's Flex program. Delivery drivers use an app to pick up and deliver packages. The app gives rewards for going faster and penalties for making mistakes or going slower. A lot of these algorithms try to make workers do their jobs faster. But this doesn't always work for disabled people. One disability advocate said algorithms make assumptions about how fast people work. The Amazon Flex program has fired drivers who are too slow.

- **Gig economy jobs can really disadvantage disabled workers:**

Gig economy jobs are more popular today. Gig economy jobs mean you work for a company but not for regular hours. You do one task at a time. You get paid on a separate contract, not like a regular employee. Some examples are driving for Uber where you pick up one rider at a time. Or delivering food for GrubHub where you take orders for lots of customers from lots of restaurants.

Gig economy jobs can be good for disabled workers. You can set your own hours. So you can take time off to go to doctors' appointments. Or you can work short shifts if it's too hard to work a long time. Some gig economy companies are even trying to

recruit more disabled workers. Lyft is partnering with the National Association of the Deaf to hire more deaf drivers. And Uber is working with Communication Service for the Deaf to make the job better for deaf drivers.

But gig economy jobs can also be bad for disabled workers. Companies can take advantage of disabled people. And gig workers don't get steady pay. Gig workers don't count as regular employees, so they can't get benefits either. That means no health insurance, retirement, unemployment, paid leave, or Social Security. And it also means gig workers aren't protected from discrimination by the law. Since being disabled can be expensive, many disabled people need regular benefits. Disabled people also need steady pay to plan for the unexpected.

Example Opportunities

- **The government needs to stop hiring algorithms from discriminating:** Different parts of government can help stop hiring algorithms from discriminating. For example, the White House Office of Science and Technology Policy, the Senate, the Equal Employment Opportunity Commission, and the Office of Federal Contract Compliance Programs can all help. They can investigate when algorithms discriminate. They can make more rules and policies for hiring algorithms. They can give information and resources to companies. Advocates are also learning about different kinds of hiring algorithms. That way they can tell the government, companies, and disabled people about how algorithms discriminate.
- **Companies need to be careful with how they use technology in hiring:** The American Association of People with Disabilities has a program called StartAccess. This program helps tech start-ups focus on accessibility in the beginning. StartAccess works with disabled people who run start-ups. These start-ups help disabled people find work. They can also make changes to ableist job applications. For example, AI programs can help disabled people fill out inaccessible applications. AI programs could also help deaf people do interviews by giving automatic captions.

AI programs could help nonspeaking people do interviews by reading what they write out loud. Or AI programs could help blind people do interviews by reading papers out loud. But these AI programs have one big problem. They collect information about people and can be bad for privacy.

- **Advocates should make careful recommendations about algorithms:** There are also projects like the [Civil Rights Principles for Hiring Assessment Technologies](#) and the [Algorithmic Accountability Policy Toolkit](#). These projects give people information about how to make hiring algorithms that discriminate less. These projects also challenge companies that make algorithms for hiring or benefits. Advocates should start more projects like these. They should give information about disability issues and algorithms.

D. Protecting people's privacy and information

About this issue

The United States doesn't have an overall federal privacy law. There are just some state laws and some limited federal laws (like for health privacy). But most of the laws say nothing about discrimination. It's also hard to make people and companies follow the law. We don't have enough laws to protect people. This is even worse for marginalized people like disabled people and people of color.

Systems that connect to each other or use information about people's bodies can be dangerous for disabled people. Computers can use information about people to figure out their race, gender, age, disability, and how much money they make. Then the computer programs can discriminate. Disabled people's information can also make it easier to track disabled people. This can even make it easier for companies to use people's private health information.

Disability advocates can talk about how sharing information can promote disabled people's independence. But they also need to talk about how to protect disabled people from discrimination. For example, a blind person might use a phone app to help them get around. This helps them be more independent. But the app might track their location. So the blind person can be spied on or targeted.

One advocate said disabled people are used to not having privacy. Disabled people have to share very personal information to get their needs met. So passing an overall federal privacy law means talking to disabled people about their issues.

Related issues

- **Internet of Things:** The **Internet of Things** (or **IOT**) means technology that can understand the real world. The technology can share information with other programs or computers too. People use IOT for their houses and cars. People also use IOT on their bodies.

For example, IOT can mean a smart home thermostat that can tell you how hot or cold it is. The thermostat can also change the house's temperature on its own. And the thermostat can connect to an app on your phone that gives you information about the temperature. Another example of IOT is a Fitbit. People wear Fitbits on their wrists. Fitbits can track information about their heart beat, their breathing, and how much they walk. People can look up the information in an app. They can use the Fitbit to help them exercise and stay healthy.

IOT technology can make disabled people more independent. Disabled people who can't walk or hold things can still use IOT to change the temperature, turn lights on and off, or use security systems. But IOT technology isn't inclusive for everyone. A deaf disability expert said that IOT technology can force people to talk to use it. So deaf people might not be able to use IOT technology.

And worse, IOT technology tracks a lot of information about people. IOT can keep track of what you do every single day in extreme detail. So one technology expert said it's important to stop this information from being used to discriminate. If an IOT technology can figure out someone is disabled, companies could use that information to charge them more for health insurance.

- **Personal information about people's bodies:** Companies that make IOT technology want to use **biometric** information. Biometric information means specific information about people's individual bodies. Examples of biometric information are fingerprints, eye scans, and DNA. Companies use people's eye scans and fingerprints to log in to IOT technology. This can help prevent other people from using your technology. It can also be

helpful for some disabled people who have a hard time typing or remembering their keys. But using biometric information is also dangerous. It can be bad for disabled people's privacy. And it can exclude some disabled people, like someone who doesn't have a real eye or someone who doesn't have hands.

Example Opportunities

- **Advocates can talk about the dangers of collecting information on disabled people:** The [Future of Privacy Forum](#) worked with the [Community Living Policy Center](#) at the [University of California, San Francisco](#) on a report. Their report talked about how IOT can help disabled people. It also talked about how IOT can be hard for disabled people. And it talked about how collecting information on disabled people can be dangerous.
- **Advocates can hold meetings across different groups to talk about privacy issues:** Advocates already want to hold meetings for different groups to work together. They want technology groups, civil rights groups, and disability rights groups to work together. One example of this is AAPD's Tech Forum. The Tech Forum brings together disability groups and tech companies. They talk about issues like self-driving cars, accessibility, and privacy. There are also civil rights groups that talk to companies about assistive technology and how to protect people's privacy.

E. Stopping hate speech but protecting free expression

About this issue

The internet is a public space. People use the internet to learn new things. They use the internet for fun. They use the internet for work. And they use the internet to meet people and have a social life. You don't have to be close to people to talk to them online. Billions of people in every country use the internet to talk to each other. And people in marginalized groups use the internet to connect with each other. Marginalized people use the internet to share their stories and speak out. Marginalized people use the internet to do advocacy. And marginalized people use the internet to make money.

For example, #CripTheVote is a **hashtag** that lots of disabled people use. Hashtags are words or phrases that let people find stuff online about the same topic. #CripTheVote has helped disabled people talk about accessible voting. It also helps disabled people speak out to people running for office. Another example is Aaron Phillip. Aaron is a Black and transgender disabled person. Aaron is very popular on Twitter. Being popular on Twitter got him noticed by big companies like Sephora, Nike, and Dove. And now Aaron is a model.

All of this means it's important for people to have free expression. But there is also a lot of hate speech online. There is a lot of bad information online that can hurt people. Hate groups use the internet to try to stop marginalized people from voting. And hate speech often goes after people of color, religious minorities like Jews and Muslims, women, disabled people, and transgender and nonbinary people. In 2018, a [report in the UK said that online hate against disabled people grew 33% every year](#).

So technology policy has to think about protecting people's civil rights and stopping hate speech. It also has to think about making sure people can have free expression at the same time.

Related issues

- **Companies need to listen to disabled people when they make rules about hate speech:** Disabled people get a lot of hate and abuse online. But companies don't think about disabled people's point of view when they make rules about hate speech. Sometimes, companies just think of disabled people as the problem. They don't think of disabled people as an identity group. In 2019, TikTok said they hid content from autistic people, people with Down syndrome, and people with face disfigurements (any kind of face that is different from "normal"). TikTok said they hid disabled people's content to try to protect them from bullying. But this rule actually discriminated against disabled people. They should have talked to disabled people about what to do instead.
- **Companies can't use algorithms to automatically control hate speech:** It's very expensive to pay lots of people to read millions of posts and watch millions of videos. So companies want to use AI and algorithms to automatically control hate speech. They started doing this even more in the COVID-19 pandemic. But automatically controlling hate speech can discriminate against marginalized people. One technology advocate said the software has a hard time understanding the full picture. It can't tell the difference between a joke and something serious. And the software probably doesn't have enough information about disability.

When a computer program takes down your post or account, it can be hard to find out why. It can also be hard to get your account back. During COVID-19, Facebook sent workers who look for hate speech home. When workers looked for hate speech, 2.3 million people appealed their post getting taken down - and won. But when workers went home, only 12,600 people did. That's less than 1% from before!

Using AI to take down posts and handle appeals could discriminate against disabled people too. Lots of disabled people have communication access barriers. Though the same barriers could also show up when workers look for hate speech too.

Using AI to take down posts can even be bad for ads. Facebook has an automatic ads program. The Facebook program takes down lots of ads about accessible clothing for disabled people.

- **Advocates should speak up against bad information. They should help people vote:** During the last national election, the internet was full of bad information. Some of the information was wrong by accident (**misinformation**). Some of the information was wrong on purpose (**disinformation**) to lie to people.

Lots of bad information can make it hard for people to vote. Disabled people need to know if they can go somewhere to vote or drop off their ballot. But voting can be inaccessible. Disabled people were 7% less likely to vote in 2020 than nondisabled people.

Groups that give out disinformation are trying to stop people of color from voting. And a lot of people of color also have disabilities. So disabled people of color are affected more.

Example Opportunities

- **Work with disabled people to stop hate:** There are groups like [Stop Hate for Profit](#) and [Change the Terms](#) that ask social media companies to stop hate online. Advocates could work with disabled people to talk about hate against disabled people.
- **Talk to disabled people about online hate for research:** There isn't enough information yet about how disabled people deal with online hate. Groups in the UK have done surveys about hate that include disabled people. But groups in the US haven't done this. The American Views on Trust, Media and Democracy survey could ask disabled people about online hate. They could also talk to disabled people about misinformation and disinformation. And they could talk to disabled people of color specifically.

F. Protecting students from surveillance

About this issue

Police, immigration officers, and school leaders are using surveillance technology. Surveillance means watching and listening to people. Some examples of surveillance technology are social media monitoring, software that guesses if students are threats, and test taking software. Surveillance technology can get students punished or kicked out of school. Surveillance technology is supposed to help students who are thinking about hurting themselves. Surveillance technology is also supposed to stop students from being violent to others. But surveillance technology doesn't work.

A lot of students punished in schools are already disabled. They are often students of color too. So surveillance technology can discriminate against disabled people and people of color. They can change disabled people of color's whole lives. The US Civil Rights Commission said that [disabled people of color are more likely to get punished or kicked out of school](#). Then they are more likely to go to prison later. The Center for American Progress also said disabled people are more likely to go to prison than nondisabled people. Technology shouldn't make this worse.

Because of COVID-19, more schools are using surveillance technology. For example, test taking software watches students on their computers. It can use AI to guess if students are cheating. So the computer might say a student with cerebral palsy is suspicious because they have body spasms. Or it might say a student with ADD isn't paying attention because they are knitting or doodling.

Related issues

- **Spying on students' social media:** Schools want to stop mass shootings. So they pay for software that spies on students online. But these programs don't work. They are bad for privacy. And they can make disabled students of color and LGBTQ students shut down. Marginalized people are less safe when they're spied on. And they don't get to have free expression.
- **Software that guesses if students are threats:** Schools also use software to guess if students might be threats. This is called **threat assessment**. Threat assessment software collects information about mental illness and foster care. It reads social media posts and looks for angry or sad posts. It makes guesses about which students might be threats. And then those students can get in trouble. This can be bad for disabled people who have gotten therapy, for example.
- **Spying on students' computers:** Poor people are less likely to have technology because it's expensive. So a lot of schools give computers and tablets to poor students. More schools did this during COVID-19 when students had to do classes online. Schools also used more test taking software so students could take tests at home. One test taking software company had 900% more business in the beginning of the pandemic. These programs use software that recognizes faces, spies on students' eye movement, and tracks what students type. CDT did research and [found out that students with school computers get spied on more](#). And the software might think disabled students are cheating because of how they move or communicate.

Example Opportunities

- **Lawmakers should include disability when making laws about children's privacy:** A group called Student Privacy Compass wrote a letter with 40 other groups about school safety, civil rights, technology, and disability rights groups all signed the letter. The letter talked about what good child privacy laws would look like. It talked about students' privacy, dignity, and right to equal education. It also talked about surveillance technology and collecting information.
- **Advocates should include disability organizations to stop test-taking software:** Groups like Fight for the Future want to ban test-taking software that spies on students. Advocacy groups should work together. They should include disabled people and work with disability organizations.

G. Stopping police abuse

About this issue

Police do more surveillance on disabled people. They arrest disabled people more, and send more disabled people to prison. This is even worse for disabled people of color. Police can use technology in racist and ableist ways. This happens because there is already racism and ableism in the world. But police technology can also make racism and ableism worse. For example, a lot of people with mental illnesses have criminal records because police get involved.

Police use [algorithms to guess who will commit crimes](#). They also use algorithms to guess where crimes will be committed. These algorithms use information about where police went in the past. Police have always made more arrests where people of color live. So the software will guess that people of color are more likely to commit crimes. Or the software will guess that neighborhoods with more people of color are more likely to have crime. And then police might arrest more disabled people of color living in neighborhoods with other people of color.

Police don't know how to communicate with deaf people. They don't know how to support people having a mental health crisis. And they're more likely to think Black and Brown people are dangerous. This is bad for disabled people of color.

The [Center for American Progress found out that people in prison are 3 times more likely to be disabled than people outside prison](#). And people in prison are 4 times more likely to have a mental disability than people outside prison.

Using technology to control immigrants is also dangerous. Spying on immigrants is bad for civil rights. Using technology to make decisions about immigrants is also bad for civil rights. And using technology in immigration court can make it hard to protect immigrants' rights - and hard for immigrants to communicate.

Related issues

- **Software that recognizes faces (Facial Recognition Technology/FRT):** MIT researcher [Joy Buolamwini](#) found out that FRT makes a lot of mistakes. FRT was wrong about less than 1% of light-skinned men. But it was wrong about 34.7% of dark-skinned women. Police use FRT. So do schools and stores. But when police use FRT, they can arrest the wrong people. They can send the wrong people to prison. Disabled people of color already deal with a lot of surveillance. This can be worse for Black and Brown disabled people. Police often arrest the wrong person, like Robert Williams.

But some disability advocates think FRT can help disabled people be more independent. For example, FRT can tell blind people who other people are. So banning all FRT could be bad for accessibility.

- **Software that guesses who will commit crimes or who is dangerous:** AI software programs try to guess who will commit crimes. This is called person-based software. They also try to guess where crimes will be committed. This is called place-based software. But the AI can make discrimination worse. Homeless people with disabilities might deal with police a lot. So the software might guess that they are dangerous. Or that places where they sleep are dangerous.

Being disabled can also make it hard to show up in court. And software that guesses if you will come to court can guess wrong. It won't take into account being disabled and not having accessible transportation. So software might guess that someone is dangerous because they don't have transportation. And then a judge could keep someone in jail, and not give them bail to go home.

- **Sign language interpreters on video:** Video Remote Interpreting lets deaf people call an interpreter on a computer or phone screen. The interpreter can be anywhere. This means you don't have to wait for a sign language interpreter in person. But police use video interpreting when talking to deaf people. This is dangerous, especially for Black and Brown deaf people. Video interpreting

isn't as good as in-person interpreters. The video can stop working because of a bad connection too. Talking to the police can be a life or death situation. So police shouldn't be relying on video interpreting. And lawmakers need to talk to deaf people.

- **Video phones in prison:** Video phones let deaf people talk to each other with sign languages. They do for deaf people what regular phones do for hearing people. But almost no jails or prisons have video phones. So lots of deaf people in prison can't talk to their friends or families. And a lot of deaf people in prison are Black or Brown. This means a lot of Black and Brown deaf people can't talk to friends or families.
- **Interviewing immigrants at the border:** The Department of Homeland Security uses surveillance technology and algorithms to help interview immigrants at the border. Some of the technology is made by a company called Palantir. The technology doesn't work for deaf people who use languages besides American Sign Language. So deaf immigrants can be stuck without communication. Worse, they can be labeled dangerous, and then deal with more surveillance.
- **Software that recognizes how people walk:** Some software programs recognize how people walk (their **gait**). The Department of Homeland Security has used this software at travel checkpoints. The software can choose people to be questioned or spied on. But the software sometimes thinks people are suspicious because they go to the bathroom a lot. The software thinks people are suspicious because of how they move, which can be bad for a lot of disabled people.

Example Opportunities

- **Advocates should include disability organizations when they make ideas for laws about FRT:** Groups of disability, civil rights, and tech organizations wrote letters to the president and Congress. They talked about how FRT can hurt disabled people. Advocates also talk about how laws about FRT should include disabled people. They should talk to disabled people about ways that FRT could be helpful for accessibility.

H. Accessing healthcare

About this issue

Healthcare systems want to use technology to make getting care faster and better. But it doesn't always work. Algorithms in healthcare can hurt marginalized people. Companies don't always tell people what AI they are using either. They say that they get to keep secrets. They also say that health privacy law means they don't have to talk about their computer programs. But this is dangerous.

Some disabled people have to see doctors a lot. Some disabled people need health care every day. So health algorithms and other technology can be extremely dangerous for disabled people. Some companies use algorithms to make decisions about people's treatment. And they can make decisions about how doctors and nurses take care of people.

Health algorithms don't understand disability well. They are bad at treating people as individuals. Health algorithms can be especially bad for disabled people of color. A lot of doctors and nurses think that Black people feel less pain than white people. [This is racist and wrong](#). There are other racist and wrong beliefs out there too. So algorithms can make decisions that are racist and ableist at the same time.

Related issues

- **Telehealth appointments:** Sometimes people see doctors, nurses, and therapists at home. They talk to the doctor on a computer or phone. This is called a telehealth visit, like telephone. More people started doing telehealth during COVID-19. In April 2020, [half of all regular doctor visits for people on Medicare were telehealth](#). That's 350 times more than before the pandemic! The high rate is because more people are getting Medicare. But it's also because Medicare will pay for telehealth. But telehealth can

be inaccessible to disabled people. The software might not be accessible. Deaf people might not be able to share the screen with an interpreter. Broadband is very expensive. And lots of disabled people are poor.

- **Algorithms that make health decisions:** Algorithms can help doctors and nurses make decisions. But patients don't always know when doctors are using algorithms. For example, hospitals sometimes use algorithms to guess how risky it is to prescribe people strong pain medication called **opioids**. There are a lot of laws that make it hard to get opioids. Opioids can get people addicted. The algorithms for opioids collect information from hospitals, pharmacies, and doctors and give people scores. People can get a higher risk score for going to lots of doctors. This is bad for disabled people who need to go to lots of doctors.

In 2021, [researchers also found out that a major health algorithm was biased](#). This algorithm makes guesses about 200 million people's health. It tries to guess who will need intense care that costs more money. Hospitals and insurance companies use the algorithm to try to pay less money. But the algorithm got it wrong for Black patients. White patients cost more money because they go to the doctor for normal visits more. But Black patients might be less likely to trust doctors because of racism. They might be more likely to be poor and not afford health care because of racism. They might be less likely to have accessible transportation because of racism. So the algorithm thought Black people needed less intense care. The algorithm was making guesses about how expensive health care was. Not about how sick people were.

Disabled people probably have the same kinds of problems. So algorithms that assume everyone is white and nondisabled will be wrong for disabled people too.

- **Hiding information about computer programs and health data:** Disabled people also have to worry about who can see and use their information. Health algorithms use a lot of information to make guesses and decisions. This information has to be kept somewhere. And a lot of the information about people is extremely personal and private.

This information is called health data. There is no overall federal law about health data. The health privacy law HIPAA only covers some health information, like from doctors and insurance companies. It doesn't protect health information from apps, IOT, or phones. But new apps can track information about mental health, eating habits, exercise, and periods.

And most people have no idea who gets to see and use all this health data. Then companies use algorithms that they don't tell people about. It's hard to know what the algorithms are doing. It's hard to know what information the algorithms are using. There are a lot of questions about health data, and how it could be used to discriminate.

Example Opportunities

- **Researchers should think about disability, health algorithms, and bias:** In 2019, the AI Now Institute at New York University, the NYU Center for Disability Studies, and Microsoft had a conference. They invited disability researchers and AI researchers. They wrote a report about disability, bias, and AI. The report talked about health care.
- **Advocates should think about protecting privacy for people who need government help:** In 2017, [Dr. Khiara M. Bridges](#) wrote a book. This book talks about people forced to deal with state governments to get health care. That could be people who get Medicare or Medicaid. A lot of these people are disabled, poor, and people of color. They don't get to have a lot of privacy compared to people who can get health care without government help.

I. Being careful about new technology

About this issue

New technology can help disabled people communicate and be more independent. Disabled people are paying attention to self-driving cars, virtual reality, and technology that automatically recognizes speech. But disabled people have to be part of design teams. New technology can also discriminate. It can lead to online hate and abuse. And it can be used to spy on people and take away privacy.

One example is software that automatically recognizes speech then gives captions. This software makes accessibility better for lots of disabled people. But the software isn't perfect. It often gets words wrong. It doesn't understand people with foreign accents. It doesn't understand people of color. It doesn't understand people with speech disabilities. And it could be used to track people who do have speech disabilities.

One disability advocate said we should talk about how technology can help. But we shouldn't talk about technology as a cure or a fix. For example, a lot of new technology makes people talk to use it. But that's not accessible to deaf people.

Related issues

- **Self-driving cars:** Self-driving cars could help a lot of disabled people be more independent. But they could also be used to spy on people and track where they go. If companies know where disabled people are going, what time of day they are going, and what's at that location, then can learn a lot of private information about a person.

Self-driving cars also have a hard time knowing when to stop for Black people and people in wheelchairs. This is dangerous.

- **Virtual reality:** Virtual reality is technology that lets a person go around an online space and feel like it is real. They get to look around, move in, and touch things in the online space. But people making virtual reality technology aren't really talking to disabled people about how disabled people do things in the world.
- **Automatic captions:** Disabled people need free captioning and software that recognizes speech. But automatic captions and software that recognizes speech can also discriminate. Programs can give bad information about doctor's appointments, court cases, and even COVID-19. This is really dangerous in life or death situations. But it's also inaccessible in everyday situations. For example, automatic captions for Amanda Gorman's national poem showed "bruised butt hole" when she said "bruised, but whole." That was inappropriate and wrong. And automatic captions sometimes hide swear words, which means disabled people might not know what people are saying.

Example Opportunities

- **Advocates can support disabled people working on new technology issues:** Companies making self-driving cars need to think about disabled people. They should think about how the software could track and spy on disabled people. [We Will Ride](#) and [Transportation Equity Caucus](#) are groups working on this issue.

Challenges, Needs, and Opportunities

Technology is part of everyday life. But disabled people need to use technology differently than nondisabled people. And technology can hurt disabled people in many ways.

These are two important questions:

- What stops people from working on technology and disability at the same time?
- What support do leaders and organizations need to do their work well?

Lots of disability advocates work on tech issues. But tech companies and lawmakers need to include disabled people more. There are lots of challenges for disability advocates. There are also lots of challenges for technology advocates. And a lot of marginalized people work in nonprofits, but nonprofits pay very little.

We talk about what the challenges and opportunities are. There are 8 challenges and 10 needs/opportunities.

I. Challenges

1. We have to talk about accessibility. At the same time, talking about accessibility isn't enough.

Historically, disabled advocates talked about accessibility as getting access to places and spaces. Digital accessibility is a new topic for disability civil rights. Technology that isn't accessible can make new barriers for disabled people.

- a. Inaccessible technology can totally exclude disabled people from working on accessibility.** Disabled people who want to improve technology are stuck. To know what's wrong, they have to be able to use the technology. But if it's inaccessible, they can't use it. So tech companies need to handle basic accessibility from the start. That way disabled people will work more with tech companies on accessibility. And tech companies won't just leave things to be inaccessible. Congress passed the 21st Century Communications and Video Accessibility Act in 2010, but leaders need to do more.
- b. Disability organizations have to take the lead on accessibility issues.** That can make it hard to work on other technology issues. Disability advocates are the experts on accessibility. But spending all their time doing accessibility means less time to work on other tech issues. Tech companies need to give people more money to work on accessibility. And tech companies need to do their part in making their programs and devices accessible.
- c. But it's still bad to assume that technology and disability issues are only about accessibility.** Disabled people need technology to be accessible to have an even playing field. If a technology is inaccessible, disabled advocates can't figure out how it is hurting people. But inclusion means more than accessibility. Disability civil rights means fair housing and fair hiring. Disability civil rights means protecting privacy and the right to vote. Disability civil rights means protecting people from discrimination by police.

2. Disability organizations have their own needs.

Disability organizations deal with a lot of issues. So technology isn't always a top priority. For example, if members are being kicked out of their apartments and need housing help, that will be more important than technology. A lot of disability rights organizations don't include all disabled people either. Marginalized disabled people might not be part of these groups, like disabled people who are homeless or in prison.

3. Many people don't understand that disabilities can be diverse. So they don't understand how technology can hurt disabled people.

Some people who count as disabled might not call themselves disabled. And what's accessible for some disabled people can be a barrier to other disabled people. For example, more rideshare apps are good for blind and deaf people, but bad for advocates who want more wheelchair accessible transportation. People also don't know how to fix the technology. Bias audits for racial discrimination might make disability discrimination worse. And they might not help racial discrimination either. For example, an [AI Now report](#) said that an [AI program](#) labeled people's posts "more toxic" just because they talked about disability. So a company might say their programs have no bias when they actually do.

4. Disabled people aren't included in a lot of policy advocacy.

Disability rights organizations aren't always led by people with disabilities. Disabled people should have leadership positions in disability and technology organizations. And some disabled people don't feel safe telling other people they have a disability. Technology and disability organizations need to do more to hire and pay disabled experts. And they need to avoid dumping all responsibility for disability issues on just a couple of disabled people.

5. There are very few experts on disability and technology.

A lot of people we talked to agree. There aren't a lot of paid disability experts working in tech companies. There need to be more fellowships and funding for disabled people to work in tech. Disability groups do work with schools and companies on accessibility. [Teach Access](#) talks about accessibility in colleges. Teach Access

also teaches students how to think about accessibility in making technology. [XR Access](#) talks about including disabled people in virtual reality. And the [Web Accessibility Initiative](#) helps disabled people talk to people making rules about technology and accessibility. We need more projects like these.

6. Many people don't know how technology can hurt disabled people.

Technology experts are mainly white men without disabilities. And they don't even realize how technology can hurt disabled and other marginalized people. Tech experts need more education. Disability organizations need to reach out to tech companies and tech organizations.

7. There aren't a lot of connections between technology and disability advocates.

Tech groups need to listen to disability groups. But most tech experts don't even know what disability groups are out there.

8. There are a lot of divides between civil rights organizations and disability organizations.

A lot of disability rights leaders feel that civil rights groups didn't focus on disability or include disability. Often, these are white-led disability groups talking about civil rights groups led by people of color. This includes current groups like Black Lives Matter and older groups like the NAACP. Disability rights groups are also smaller today than in the 1980's and 1990's. And disability rights groups are often mostly white disabled people, and not disabled people of color. This is different from disability justice groups.

II. Needs and Opportunities

1. Technology organizations need to work on true inclusion.

Technology justice groups have to spend money to pay disabled people. Legal Aid organizations pay people who can help them work on inclusion. But a technology policy organization wanted to help disabled people get help paying for technology. And they didn't have enough money to pay for the website to be accessible. Technology groups need to work with disabled people, not just learn about accessibility on paper.

2. Disabled people need paid fellowships and funding to work on technology policy.

Lots of technology experts want their organizations to hire someone to focus on disability. Tech companies should hire disabled people as disability experts. One disabled advocate said disabled people at all career levels should get help to become leaders. But hiring a couple of disabled people doesn't fix all of these problems. Tech organizations still need to talk to more disabled people.

3. There should be paid listening sessions and focus groups to learn from disabled people.

Focus groups should include disabled people who are professional disability experts. They should also include disabled people who aren't experts. A lot of tech experts would never talk to disabled people without focus groups. This can help disabled people have their voices heard. And disabled people need to be paid to participate. Otherwise, it's unfair for tech companies to ask for disabled people's help but not pay them. And tech companies also need to truly listen to disabled people about disability.

4. Disability and technology advocates need opportunities to work together.

Disability and tech advocates could be part of meetings or conferences. This can help build trust and relationships.

- a. Build trust and respect.** Disability rights and tech groups need to have equal representation. Tech companies need to give space for disability groups. They need to learn about how diverse disabled people are. And they need to learn about how disabled people are organized in fighting for disability rights and disability justice.
- b. Figure out common goals.** Organizations work on different topics. And even disability organizations work on different disability issues. So more organizations need to talk about disability issues to learn about how they connect with each other.
- c. Get the public involved.** Tech companies should include disability in diversity programs. A lot of tech companies hire nondisabled people to run disability projects. And they should focus on hiring more disabled people for all kinds of jobs.
- d. Support leaders.** Disability and tech groups could hold meetings between CEO's and other leaders. That way organization leaders can talk to each other about gender, race, and disability justice.

5. Marginalized people deserve support. Disability and technology organizations should care about intersectionality.

Intersectionality is understanding when people are marginalized in more ways than one. For example, understanding how white disabled people and disabled people of color are treated differently. But disabled people who are marginalized in more ways than one are still excluded from a lot of conversations about disability rights. A lot of disability organizations aren't led by disabled people who are marginalized in more ways than one. Disability, civil rights, and technology organizations can all do better. They can:

- a. Understand intersectionality more.** All marginalized groups include people with disabilities. And disabled people belong to every other marginalized group too. But a lot of organizations only pay attention to some people. Many disability organizations only pay attention to white men with disabilities. Many people of color led organizations only pay attention to nondisabled people of color. Disability and tech groups could do more to learn about how tech issues hurt disabled people of color, for example.
- b. Pay attention to marginalized people.** Tech can hurt disabled people of color and other marginalized disabled people the most. But people with power don't listen to disabled people of color. And decision-makers don't pay attention to disabled people of color's needs. This is worse when disability rights groups don't include marginalized disabled people. So they don't include disabled people who are more likely to be homeless, in prison, in institutions, getting benefits, or dealing with worse discrimination. And those are the disabled people hurt the most by police technology and inaccessible benefits websites. Organizations need to seek out marginalized disabled people on purpose. Disabled people of color need more than just free registration for conferences.
- c. Create an inclusive design group.** Inclusive design means people who make tech listen to all kinds of people. They pay attention to diverse points of view. That means talking to poor people, women, disabled people, and people of color, for example. Good design invites everyone to the table.
- d. Help disability rights and civil rights groups work together.** Inequality in society also shows up in nonprofits. Nonprofits don't always do a good job of including people marginalized in more ways than one. Civil rights groups often exclude people with disabilities, even though LGBTQ people and people of color can be disabled. And disability rights groups often exclude LGBTQ people and people of color, even though disabled people can be LGBTQ or people of color. When different organizations exclude your group, it's hard to want to work with them. Organizations should care about justice for everyone.

Disability rights and civil rights groups could all use more money. Better funding means more participation in more events. It also means hiring more people who work across different topics and groups.

6. Disabled people need plain language and other accessible resources.

Disabled people are excluded from opportunities to learn and work. Disability and tech organizations need to create accessible resources in plain language. For example, glossaries that explain words in policy and advocacy resources. This can encourage organizations to use accessible language too. Disabled people deserve to understand information about disability. Disabled people also deserve to understand information about policy. Technology advocates can work with disability organizations to translate information from academic research into plain language too.

People with intellectual disabilities can understand plain language better. So can lots of deaf and hard of hearing people. And so can people with learning disabilities. A lot of disabled people are pushed out of school. So they might not learn to read complicated words. Plain language gives people complicated information in easier language. It can also help disabled people understand why tech is important. It's not just about expensive, fancy gadgets. Tech is about housing and transportation too.

7. Disability rights and civil rights organizations need fair funding.

Disabled people and disability organizations don't have enough money to work on tech issues. Some disability organizations do have money to work on tech issues. But disabled people aren't getting fair access to funding. Funding usually goes to organizations that already work on tech. This means that disability organizations will miss out. More funding needs to go to disability organizations

so they can work on tech issues. Disability organizations sometimes also have less money than other civil rights organizations. Getting more funding would mean disability organizations could get more involved with other civil rights organizations.

8. Help technology organizations include disabled people.

Big tech companies could help disabled people get connected to the tech world.

- a. Help government and companies work together.** Local and state government could give money to nonprofits. Then the nonprofits could pay disability organizations to make a plan to get more disabled people involved in tech. This would help disabled people get their voices heard as experts. Disabled people could give opinions about tech related to housing, transportation, and benefits.
- b. Work with tech companies.** Most companies don't want to discriminate against marginalized people. They want to avoid getting in trouble. So advocates could work with companies on their AI programs. Advocates could help make AI programs less biased. Advocates could help companies include disabled people.
- c. Help students and researchers work with technology groups.** Colleges should help more disabled people become researchers. This would help disabled people become involved in making new technology. It would also help disabled people do academic research. Advocates could work with groups like the Public Interest Technology University Network. More disabled people could become tech experts. Then disabled experts could help design new technology that is inclusive from the beginning. Including disabled people right away is a good thing for disability rights. It supports the idea of "Nothing about us without us."

9. Support research on disability and technology.

Researchers need funding to do their work. Helping researchers can help disability rights and tech organizations. Researchers should study how disabled people use technology. They should study how technology is inaccessible. They should also study how technology can hurt disabled people. And they should ask disabled people to share their stories about technology.

Researchers also need more information about different types of disabilities. Most science publishing wants researchers to have lots and lots of information about a group. But there are too many different types of disabilities to get enough information for science publishing. So researchers need to collect more and more information. Not enough researchers want to do this work, though. They might think it's too hard to research disability. So they don't. And then there's less published work about disability.

Paying researchers would help. Groups with money could pay researchers to focus on disability. Then they could publish what they find out. And disability rights organizations could use that information to support their advocacy.

Here are some ideas for research topics:

a. Researchers could look at different disability rights and technology laws. Some examples are the Americans with Disabilities Act (ADA), the Rehabilitation Act of 1973, and the Communications and Video Accessibility Act. The ADA makes it a little easier for disabled people to prove they are discriminated against. Other civil rights laws make it harder for people to prove they are discriminated against. Researchers could talk about **disparate impact** discrimination. That means when people in one group are treated differently than people in another group. Researchers could also look at bias in hiring algorithms. They could talk about how civil rights laws should cover algorithms. This could help the Supreme Court make decisions in the future. Researchers could also look at state laws.

- b. Support research and advocacy to make government algorithms in benefits more fair.** Advocates can do close research on how benefits algorithms work. President Biden is also looking into racial justice in government. One issue is when the government doesn't have good information. The government is also thinking about how it uses AI. Researchers can think of ideas for rules the government should follow. And researchers can think about ways to judge the care disabled people get. One idea is a law that would make a test for how good home and community-based services are.
- c. Do research on algorithms that read people's online content.** More social media companies use AI to read posts and make decisions. The AI is often biased. In 2018, researchers at a conference wrote some ideas about how to make AI that reads posts better. Researchers should pay attention to how this kind of AI affects marginalized people.
- d. Pay for research on the public's opinions about technology and disability.** There isn't a lot of research about disabled people's opinions. Pew Research in the 2010's only included some kinds of disabled people but not others. They included deaf people, people who have trouble speaking, blind people, and people living in institutions. But not any other kind of disabled people. Doing research about the public's opinions can give us more information. It can help advocates and lawyers.
- e. Research how student surveillance can hurt disabled people.** Advocacy organizations can talk about disability when they talk about student surveillance. Spying on students is bad for disabled people, especially disabled people of color.
- f. Research how police technology can hurt people with mental illnesses.** There isn't enough research about this topic. Researchers could work with mental health, criminal justice, civil rights, and technology organizations. They can focus on how police technology hurts disabled people of color.

g. Create technology policies that include disability. Banning technology could be bad for disabled people. But we still need rules and limits for dangerous technology. Researchers could think about protecting accessible technology while stopping dangerous technology. For example, we could have a law that bans a dangerous technology. But it makes an exception for using the technology as a disability accommodation only. Researchers could look at how this idea would work.

10. Connect technology and disability advocacy projects.

Disability and technology organizations should be working together. And technology organizations need to learn more about disability.

Here are some ideas for projects:

a. Work with marginalized people to make federal data privacy laws better. For example, two advocates talked about the FCC's suicide hotline. This is a phone number people can call if they are thinking about hurting themselves. The advocates got the FCC to create a text message version. That way deaf people could use the hotline too. But then the advocates learned that text messages can track someone's location. So deaf people might be scared of using the hotline. So the advocates asked the FCC to let people opt-out of sharing their location.

b. Advocate for federal funding to help people get reliable internet, phones, computers, and tablets. Disabled people are less likely to have internet, phones, computers, and tablets. Black and Brown deaf and disabled kids have been left behind from virtual school. And it's more expensive for disabled people to get connected to the internet. Disability and technology groups can advocate for more funding to help disabled people get internet and devices. They can advocate for programs to teach people how to use technology. And they can advocate for better service in different communities. This can help disabled people transition from school to adulthood too.

- c. Advocate for more remote work to give disabled people better options.** Remote work makes jobs more flexible. This makes jobs more accessible for lots of disabled people. Companies need flexible remote work policies to be inclusive. Working from home can be a disability accommodation. So employers have to give disabled workers the technology help they need to work at home.
- d. Talk about test-taking software and student surveillance as privacy issues.** College students deal with test-taking software spying on them.
- e. Investigate how automatic immigration technology hurts disabled immigrants.**
- f. Work on automatic captioning and software that recognizes speech as a complicated issue.** Automatic captioning should be free on every program. It also needs to work better. And it needs to protect people's privacy.
- g. Help disability organizations learn more about technology. Technology organizations can help disability organizations understand the ins and outs of technology issues.** They could make a plain language guide about the difference between AI fairness and AI justice. Funders could give disability organizations money to hire technology experts too.
- h. Do trainings for disability groups about federal technology policy.** Many disability advocates know very little about technology policy. Disability experts need to understand how technology affects disabled people. They also need to understand how federal technology policy works.
- i. Give money to disability groups to work on federal technology policy.** Very few disabled people work on technology issues. They are often alone. Giving money and space to disabled experts can help more disabled people work on tech issues.

Conclusion

Justice in technology means including disability issues. This report has talked about work already happening on tech and disability. It talked about new issues. And it talked about challenges and opportunities. This research will help start conversations about making tech, disability rights, and civil rights organizations more inclusive. It will help these organizations work together.

Technology companies often try to use disability organizations to sell a product. They say they will work with disability organizations but not listen to disabled people. Many disabled advocates might not know they are being used. They also might depend on money from tech companies.

We want technology, disability rights, and civil rights organizations to do better. We're glad so many people talked to us for this report. We're glad so many people are doing research and advocacy already. We might have made mistakes here. If we did, those mistakes are our fault and not anyone else's.

We hope other people will keep thinking about more questions and more issues. We want there to be more research and more policies. And we want more relationships between technology and disability advocates. We want disabled people to have more accessible technology. We want disabled people to have affordable technology. And we want to protect disabled people from being hurt by technology. That way everyone can have human rights and civil rights.

Appendix 1:

People we interviewed

Here is a list of the people we interviewed. We wrote down where they worked when we talked to them.

Maria Town

American Association of People with Disabilities (AAPD)

Jennifer Mathis

Bazon Center for Mental Health Law

Ángel Díaz

Brennan Center for Justice

Rachel Levinson-Waldman

Brennan Center for Justice

Lydia X.Z. Brown

Center for Democracy and Technology

Dara Baldwin

Center for Disability Rights

Andy Imparato

Disability Rights California

Jutta Treviranus

Inclusive Design Research Center

Anil Lewis

National Federation of the Blind

David Brody

Lawyers' Committee for Civil Rights Under Law

Bertram Lee, Jr.

Leadership Conference on Civil and Human Rights

Thomas Earle

Liberty Resources

Brandon Forester

MediaJustice

Hannah Sassaman

Movement Alliance Project

Howard A. Rosenblum

National Association of the Deaf

Zainab Alkebsi

National Association of the Deaf

K.J. Bagchi

New America's Open Technology Institute

Sarah Morris

New America's Open Technology Institute

Emily Paul

Upturn

Judy Brewer

W3C

Appendix 2:

About the authors and thank-yous

Lydia X.Z. Brown

Lydia X. Z. Brown is a Policy Counsel at the Center for Democracy & Technology. They work on the Privacy and Data Project. Lydia's work focuses on algorithms, disability rights, and disability justice. They have done research and advocacy on how algorithms are bad for people's benefits. They have also done research and advocacy on how algorithms discriminate against disabled people applying for jobs. And they have done research and advocacy on how algorithms can spy on and control disabled people, especially disabled people marginalized in more ways than one.

Outside of their work at CDT, Lydia teaches classes about disability at Georgetown University and American University. They created a group called the Fund for Community Reparations for Autistic People of Color's Interdependence, Survival, and Empowerment. The Fund gives money to individual autistic people of color. Lydia is a member of the American Bar Association's Commission on Disability Rights. They are also the co-chairperson of the ABA Section on Civil Rights and Social Justice's Disability Rights Committee, co-president of the Disability Rights Bar Association, and representative for the Disability Justice Committee on the National Lawyers Guild's board. These are all legal advocacy organizations. Lydia has also been an advisor for a lot of groups and projects. Some of those groups and projects are the Law and Politics of Digital Mental Health Technology project at the University of Melbourne, the Lurie Institute for Disability Policy at Brandeis University, and the Coelho Center for Disability Law, Policy, and Innovation at Loyola Law School. Before all that, Lydia was the chairperson of the Massachusetts Developmental Disabilities Council.

Lydia has been a public speaker at a lot of conferences and other events. They have also gotten a lot of awards for disability advocacy. Lydia graduated, without honors, from college and law school. They love cats and also food.

Henry Claypool

Henry Claypool has worked for more than 25 years on federal policy. He works to shape how policies are made and programs are run. Right now, he uses his disability policy experience on work related to healthcare and technology. Henry has two jobs today. He is a fellow at the Center for Democracy and Technology. He is also a consultant for the American Association of People with Disabilities. In both jobs, he works on technology policy. Henry helps people understand privacy issues. He also does research on how algorithms can be biased against disabled people. And he advocates for better accessibility in new technologies.

Henry has more jobs outside CDT and AAPD. Henry is the Policy Director of the Community Living Policy Center at Brandeis University. Henry also works as an independent consultant for nonprofits and disability advocacy organizations. He helped President Biden and Vice President Harris when they were starting their jobs in 2020-2021. He helped them look at what the Department of Health and Human Services was doing. Before that, President Obama chose Henry to be a member of the Commission on Long Term Care in 2013. In 2012, President Obama also asked Henry to be the first ever Principal Deputy Administrator of the Administration for Community Living (ACL). That means Henry was in charge of the ACL. ACL is a government agency in the US Department of Health and Human Services. Before ACL, Henry was the Director of the Office on Disability from 2009 - 2012. Before that, Henry was the Senior Advisor for Disability Policy to the person in charge of the Centers for Medicare and Medicaid Services from 1999 - 2001.

Claire Carey

Claire Carey is a Senior Associate at the Freedman Consulting company. Freedman Consulting works with lots of groups that pay them for help. Those are Freedman's clients. Claire helps three teams at Freedman. Claire helps the strategic planning, research, and communications teams. That means she helps make big picture plans for clients. She also does a lot of reading and writing for clients. Before Claire worked for Freedman Consulting, she was a Fulbright Scholar in Brazil. Fulbright Scholars get money from the US Government to do projects in other countries. Claire's Fulbright project was teaching English at the University Federal de Viçosa. Before her Fulbright project, Claire did internships at two groups: the Center on Budget and Policy Priorities, and Public Knowledge. She did policy advocacy, research, and writing for both internships. Claire worked on issues that help people who are poor. She also worked on technology justice. Claire graduated from Villanova University with highest honors. She got a Bachelor of Arts college degree. Claire studied Political Science for her college degree. She also studied Sociology and Spanish as minors. (College students have to pick a main topic to study for their degrees. This is called their major. They can also pick other topics they take a lot of classes in. Those are called minors. Students take less classes for minors than majors.)

Alexander C. Hart

Alexander C. Hart is a Vice President at Freedman Consulting. He is in charge of lots of different types of projects: policy, strategic planning, research, communications, public opinion, evaluation, and running meetings. He works on many different issues for clients. Those issues include technology policy, helping poor people get support and have opportunities to succeed, democracy, and new ideas for cities. Alex has worked with major political campaigns, foundations, and nonprofit organizations. Some of Alex's clients have been the Ford Foundation, Open Society Foundations, NetGain Partnership, President Obama's 2012 campaign for president, the Leadership Conference on Civil and Human Rights, and Spotlight on Poverty and Opportunity. He graduated with high honors from Georgetown University. Alex got a Bachelor of Science in Foreign Service college degree from the Walsh School of Foreign Service at Georgetown. He majored in international economics. That means he studied how money and money systems work across different countries.

Linnea Lassiter

Linnea Lassiter is a Project Manager at Freedman Consulting. She does work on public policy research, strategic planning, and helping manage groups of organizations that work together. She works on many policy issue areas related to social and racial justice. Linnea has over ten years of experience in policy, research, and advocacy. She has done a lot of work on criminal justice, hunger, and poverty. She has also done a lot of work on other issues related to racial justice. Before she worked at Freedman, Linnea worked for lots of other research and policy groups in Washington DC. Those groups include: The Urban Institute, the Pew Charitable Trusts, the West Coast Poverty Center, and the Center on Budget and Policy Priorities. Linnea graduated with high honors from The George Washington University. She got a Bachelor's in Political Science & Public Policy college degree. She also has a Master's degree in Public Policy from the University of Washington.

Thank-Yous

The authors want to thank everyone who kindly offered ideas and edits to this report. This includes thanking Francesca Galazzi for help researching and writing this report. We also thank Emily Paul, Aaron Rieke, and Ridhi Shetty for giving us many good ideas and edits for this report. Any mistakes or things that are missing from this report are our fault only.

This report exists thanks to the leadership of AAPD'S Maria Town and CDT's Alexandra Givens. Under Maria's leadership, AAPD has spent real time and money focusing on the many technology policy issues that affect people with disabilities, beyond accessibility. Under Alexandra's leadership, CDT has built disability law and policy tools that affect how they look at technology in a world that changes quickly. AAPD and CDT have worked together to write this report and done other work to help make sure technology helps everyone. We hope their work can inspire many other organizations trying to help people to work together.

We also want to thank the Ford Foundation for giving money for this report.

